REMARKS

Claims 1-19 are currently pending in the application. Applicants respectfully request reconsideration and timely withdrawal of the pending objections and rejections for the reasons discussed below.

Response to the Examiner's Response to Arguments

On pages 2-5 of the Final Office Action, the Examiner identifies certain language of HERZ as teaching "receiving a recommendation request comprising a selected item list from an advisee for a recommendation by a recommendation system" (claim 1). Applicants disagree with the reasons already made of record.

Conspicuously absent from the Examiner's arguments regarding claim 1 is any discussion whatsoever with regard to, among other things, how HERZ can be read to disclose or suggest "in response to the recommendation request, computing a plurality of similarity factors based on: at least one advisee profile from at least one newly rated item and determining which at least one user has already rated the item, wherein the advisee profile comprises a plurality of records, each record including a user identifier, an item identifier, and a rating value, such that each record is linked in a first and a second dimension".

Applicants emphasize none of the cited passages have been shown to even remotely disclose or suggest generating <u>a recommendation of at least one item of the selected item list, according to the previously provided ratings of the at least one item by the neighboring users</u>. Indeed, the Examiner has not even identified the recited selected item list. Nor has the Examiner shown how the noted language can be read or

interpreted to disclose the recited feature.

On pages 5-7 of the Final Office Action, the Examiner identifies certain language of HERZ as teaching "a user profile for a recommendation system, comprising a plurality of records, each record including a user identifier, an item identifier, and a rating value, wherein each record is linked in a first and a second dimension, the first dimension linking records with a same user identifier in a sequence according to the item identifier, and the second dimension linking records with a same item identifier in a sequence according to the user identifier" (claim 7).

The Examiner merely quotes certain language from HERZ without any explanation whatsoever with regard to which disclosed features teach which recited features of claim 7. For example, the Examiner did not identify any specific language in HERZ disclosing or suggesting a user profile for a recommendation system, comprising a plurality of records, each record including a user identifier, an item identifier, and a rating value, wherein <u>each record is linked in a first and a second dimension,</u> <u>the first dimension linking records with a same user identifier in a sequence according to the item identifier, and the second dimension linking records with a same item identifier in a sequence according to the user identifier</u>. Nor has the Examiner shown how the noted language can be read or interpreted to disclose or suggest the recited features. Indeed, the Examiner has not even specified which features in HERZ that can be characterized as a <u>user identifier</u>, an <u>item identifier</u>, a <u>rating value</u>, or <u>a first and a second dimension</u>.

On pages 7-8 of the Final Office Action, the Examiner identifies certain language of HERZ as teaching "selecting a first set of users from a group of users of the

recommendation system based on the selected item list and selecting neighboring

users from the first set of users based on similarities between the advisee and each

member of the first set of users" (claim 8).

The Examiner quotes the <u>same language</u> used to reject claim 7 from HERZ

without any explanation whatsoever with regard to which disclosed features teach which

recited features of claim 8. For example, none of the cited passages have been shown

to even remotely disclose or suggest selecting a first set of users from a group of users

of the recommendation system based on the selected item list and selecting

neighboring users from the first set of users based on similarities between the advisee

and each member of the first set of users. The Examiner has simply not demonstrated

that these features are disclosed or suggested by HERZ.

35 U.S.C. § 103 Rejection

Claims 1-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over

US Patent No. 6,029,195 to HERZ ("HERZ"). Applicants respectfully traverse this

rejection for at least the following reasons.

Independent claim 1 recites, in pertinent part:

computing a plurality of similarity factors based on:
    at least one advisee profile from at least one newly rated item and
determining which at least one user has already rated the item, wherein
the advisee profile for a recommendation system comprises a plurality of
records, each record including a user identifier, an item identifier, and a
rating value, such that each record is linked in a first and a second
dimension; and
generating a recommendation of at least one item of the selected item
list, according to the previously provided ratings of the at least one item
by the neighboring users.

Independent claim 7 recites, in pertinent part:

each record including a user identifier, an item identifier, and a rating value, wherein each record is linked in a first and a second dimension, the first dimension linking records with a same user identifier in a sequence according to the item identifier, and the second dimension linking records with a same item identifier in a sequence according to the user identifier.

Independent claim 8 recites, in pertinent part:

receiving a recommendation request comprising a selected item list from the advisee for the recommendation by a recommendation system; in response to the recommendation request, computing a plurality of similarity factors based on at least one advisee profile from at least one newly rated item and determining which at least one user has already rated the item, and generating a recommendation of at least one item from the selected item list based on ratings provided by each neighboring user.

Independent claim 1

In rejecting independent claim 1, the Examiner points to col. 25, lines 46-62 and col. 3, lines 1-10 of HERZ as disclosing "receiving a recommendation request comprising a selected item list from an advisee for a recommendation by a recommendation system". Applicants disagree. The noted language of HERZ merely states the following:

Note that for bottom-up clustering to work, it must be possible to apply the clustering algorithm to a set of existing clusters. This requires a notion of the distance between two clusters. The method disclosed above for measuring the distance between target objects can be applied directly, provided that clusters are profiled in the same way as target objects. It is only necessary to adopt the convention that a cluster's profile is the average of the target profiles of all the target objects in the cluster; that is, to determine the cluster's value for a given attribute, take the mean value of that attribute across all the target objects in the cluster. For the mean value to be well-defined, all attributes must be numeric, so it is necessary as usual to replace each textual or associative attribute with its decomposition into numeric attributes (scores), as described earlier. For example, the target profile of a single Woody Allen film would assign "Woody-Allen" a score of 1 in the "name-of-director" field

The information retrieval computer generates an article profile for the request

and then retrieves articles with profiles similar to the profile generated for the request. These requests can then be refined using "relevance feedback", where the user actively or passively rates the articles retrieved as to how close the information contained therein is to what is desired. The information retrieval computer then uses this relevance feedback information to refine the request profile and the process is repeated until the user either finds enough articles or tires of the search.

There is no language in the noted passages even remotely disclosing <u>receiving a recommendation request comprising a selected item list from an advisee</u> for a recommendation by a recommendation system. Retrieving articles with profiles similar to the profile generated for a request is simply not the same as <u>receiving a recommendation request comprising a selected item list from an advisee</u> for a recommendation by a recommendation system. Nor has the Examiner shown how the noted language can be read or interpreted to disclose the recited feature.

The Examiner also points to col. 3, lines 7-10 of HERZ as disclosing "in response to the recommendation request, computing a plurality of similarity factors based on: at least one advisee profile from at least one newly rated item and determining which at least one user has already rated the item, wherein the advisee profile comprises a plurality of records, each record including a user identifier, an item identifier, and a rating value, such that each record is linked in a first and a second dimension". Applicants disagree. The noted language of HERZ merely states the following:

The information retrieval computer then uses this relevance feedback information to refine the request profile and the process is repeated until the user either finds enough articles or tires of the search.

There is no language whatsoever in the noted passage disclosing in response to the recommendation request, computing a plurality of similarity factors based on: at least one advisee profile from <u>at least one newly rated item and determining which at</u>

least one user has already rated the item, wherein the advisee profile comprises a

plurality of records, each record including a user identifier, an item identifier, and a

rating value, such that each record is linked in a first and a second dimension. The

above-noted language of HERZ says nothing about rating items, much less,

determining which at least one user has already rated the item. Nor has the Examiner

shown how the noted language can be read or interpreted to disclose the recited

feature.

    The Examiner additionally points to col. 3, lines 1-3 and col. 6, lines 38-45 of

HERZ as disclosing items from the selected item list that indicate similarity between the

advisee and a plurality of users of the recommendation system who have previously

provided ratings of items from the selected item list. Applicants disagree. The noted

language of HERZ merely states the following:

> The information retrieval computer generates an article profile for the request
> and then retrieves articles with profiles similar to the profile generated for the
> request.

> In all these cases, the information delivery process in the preferred embodiment
> is based on determining the similarity between a profile for the target object and
> the profiles of target objects for which the user (or a similar user) has provided
> positive feedback in the past. The individual data that describe a target object
> and constitute the target object's profile are herein termed "attributes" of the
> target object.

    There is no language whatsoever in the noted passages disclosing items from

the selected item list that indicate similarity between the advisee and a plurality of users

of the recommendation system who have previously provided ratings of items from the

selected item list. Obtaining positive feedback from a user is simply not the same as

obtaining from the advisee and a plurality of users ratings of items from the selected

item list. Nor has the Examiner shown how the noted language can be read or

interpreted to disclose the recited feature.

The Examiner additionally points to col. 12, lines 25-27 and col. 20, lines 1-22 of

HERZ as disclosing "selecting, from the plurality of users of the recommendation

system, neighboring users to the advisee, according to the similarity factors".

Applicants disagree. The noted language of HERZ merely states the following:

> As always, the notion is that similar consumers buy similar products. It should be
> noted that diverse sorts of information are being used here to characterize
> consumers
> The method of determining a user's interest relies on the following heuristic:
> when X and Y are similar target objects (have similar attributes), and U and V are
> similar users (have similar attributes), then topical interest f(U, X) is predicted to
> have a similar value to the value of topical interest f(V, Y). This heuristic leads to
> an effective method because estimated values of the topical interest function f(*,
> *) are actually know n for certain arguments to that function: specifically, if user V
> has provided a relevance-feedback rating of r(V, Y) for target object Y, then
> insofar as that rating represents user V's true interest in target object Y, we have
> r(V, Y)=q(V, Y)+f(V, Y) and can estimate f(V, Y) as r(V, Y)-q(V, Y). Thus, the
> problem of estimating topical interest at all points becomes a problem of
> interpolating among these estimates of topical interest at selected points, such
> as the feedback estimate of f(V, Y) a s r(V, Y)-q(V, Y). This interpolation can be
> accomplished with any standard smoothing technique, using as input the known
> point estimates of the value of the topical interest function f(*, *), and determining
> as output a function that approximates the entire topical interest function f(*, *).

Applicants fail to recognize any language in the noted passage disclosing

selecting, from the plurality of users of the recommendation system, neighboring users

to the advisee, according to the similarity factors. Determining a user's interest using a

heuristic is simply not the same as selecting, from the plurality of users of the

recommendation system, neighboring users to the advisee, according to the similarity

factors. Nor has the Examiner shown how the noted language can be read or

interpreted to disclose the recited feature.

The Examiner also points to col. 70, lines 1-7 of HERZ as disclosing "generating

a recommendation of at least one item of the selected item list, according to the

previously provided ratings of the at least one item by the neighboring users".

Applicants disagree. The noted language of HERZ merely states the following:

> 1. Automatically create a "customized newspaper".
> User profiling enabling custom recommendations may be achieved by purely
> passive means of user activity data or if desired, it can refine and automate the
> selection process of articles within user selected categories of interest as well as
> recommend articles within different categories which the user is likely to prefer as
> evidenced through past behaviors.

Applicants fail to recognize any language in the noted passages disclosing

generating <u>a recommendation of at least one item of the selected item list</u>, <u>according to</u>

<u>the previously provided ratings of the at least one item by the neighboring users</u>.

Indeed, the Examiner has not even identified the recited selected item list. Nor has the

Examiner shown how the noted language can be read or interpreted to disclose the

recited feature.

Finally, on page 9 of the Office Action, the Examiner acknowledges that HERZ

"does not utilize identical terminology with respect to the instant case", but explains that

"it would have been obvious to one of ordinary skill in the art to adapt the invention in

Herz for the uses in the instant invention in order to facilitate sales". Completely absent

from this conclusion, however, is any explanation of even the <u>similarities</u> between the

so-called non-identical terminology. Nor has the Examiner identified any prior art basis

for modifying HERZ "to facilitate sales."

Applicants submit that the Examiner has provided only conclusions of

obviousness and neglects to set forth any <u>prior art</u> basis for modifying the teachings of

HERZ. In establishing a *prima facie* case of obviousness under 35 U.S.C. § 103, it is

incumbent upon the Examiner to provide a reason *why* one of ordinary skill in the art

would have found it obvious to modify a prior art reference or to combine reference

teachings to arrive at the claimed invention. *See Ex parte Clapp*, 227 USPQ 972

(B.P.A.I. 1985). As noted above, the applied document is silent with regard to a

number of recited features and relates to a information system which functions in a

different manner. Moreover, HERZ does not teach or suggest modifying the structure

or operation of HERZ in the manner asserted by the Examiner.

Because the art of record fails to provide any reasonable explanation why one

ordinarily skilled in the art would utilize such an arrangement, and/or fails to disclose or

suggest the problems that such an arrangement would address, Applicants submit that the

art of record fails to provide the requisite rationale as to *why* one ordinarily skilled in the art

would modify HERZ to include features of the invention in the manner asserted by the

Examiner. That is, Applicants submit that because the Examiner has not set forth any basis

or reason found in the art of record for modifying HERZ, the instant rejection has no basis

in the art of record, such that the rejection is improper and should be withdrawn.

Rejections based on 35 U.S.C. § 103 must rest on a factual basis with these facts

being interpreted without hindsight reconstruction of the invention from the prior art. The

Examiner has the initial duty of supplying the factual basis for the rejection and may not,

because of doubt that the invention is patentable, resort to speculation, unfounded

assumption or hindsight reconstruction to supply deficiencies in the factual basis. *See In

re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967). As stated in *W.L.

Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-313

(Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984):

> [t]o imbue one of ordinary skill in the art with knowledge of the invention in
> suit, when no prior art reference or references of record convey or suggest
> that knowledge, is to fall victim to the insidious effect of a hindsight syndrome
> wherein that which only the inventor taught is used against its teacher.

Applicants submit that the only reason to modify the teachings of the applied

reference in the manner proposed by the Examiner is the result of a review of Applicants'

disclosure and the application of impermissible hindsight.

Independent claim 7

In rejecting independent claim 7, the Examiner points to col. 39, lines 1-22 of

HERZ as disclosing "a user profile for a recommendation system, comprising a plurality

of records, each record including a user identifier, an item identifier, and a rating value,

wherein each record is linked in a first and a second dimension, the first dimension

linking records with a same user identifier in a sequence according to the item identifier,

and the second dimension linking records with a same item identifier in a sequence

according to the user identifier". Applicants disagree. The noted language of HERZ

merely states the following:

> Specifically, letting S denote the server that is directly associated with user U's client processor, the proxy server communicates with server S (and thence with user U), either through anonymizing mix paths that obscure the identity of server S and user U, in which case the proxy server knows user U only through a secure pseudonym, or else through a conventional virtual point-to-point connection, in which case the proxy server knows user U by user U's address at server S, which address may be regarded as a non-secure pseudonym for user U.
>
> 2. A second function of the proxy server is to record user-specific information associated with user U. This user-specific information includes a user profile and target profile interest summary for user U, as well as a list of access control instructions specified by user U, as described below, and a set of one-time return addresses provided by user U that can be used to send messages to user U without knowing user U's true identity. All of this user-specific information is stored in a database that is keyed by user U's pseudonym (whether secure or non-secure) on the proxy server.

There is no language in the noted passage disclosing a user profile for a

recommendation system, comprising a plurality of records, each record including a user

identifier, an item identifier, and a rating value, wherein <u>each record is linked in a first</u>

<u>and a second dimension,</u> <u>the first dimension linking records with a same user identifier</u>

<u>in a sequence according to the item identifier, and the second dimension linking records</u>

<u>with a same item identifier in a sequence according to the user identifier</u>. Nor has the

Examiner shown how the noted language can be read or interpreted to disclose or

suggest the recited feature. Indeed, the Examiner has not even bothered to specify

which features in HERZ that can be characterized as a <u>user identifier</u>, an <u>item identifier</u>,

a <u>rating value</u>, or <u>a first and a second dimension</u>.

Independent claim 8

In rejecting independent claim 8, the Examiner refers to the arguments made in

rejecting claims 1-7. Applicants disagree at least for the same reasons as those of

claim 1. However, Applicants note that claim 8 also recites selecting a first set of users

from a group of users of the recommendation system based on the selected item list

and selecting neighboring users from the first set of users based on similarities between

the advisee and each member of the first set of users. The Examiner has simply not

demonstrated that these features are disclosed or suggested by HERZ.

Furthermore, to the extent that the Examiner is basing the instant rejection of

claims 1-19 on an argument of inherency consistent with MPEP 2112, Applicants note

that MPEP 2112 specifically states, in part:

> "In relying upon the theory of inherency, the examiner must provide a basis in
> fact and/or technical reasoning to reasonably support the determination that the
> allegedly inherent characteristic <u>necessarily</u> flows from the teachings of the
> applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter.
> 1990) (emphasis in original) (Applicant's invention was directed to a biaxially
> oriented, flexible dilation catheter balloon (a tube which expands upon inflation)
> used, for example, in clearing the blood vessels of heart patients). The examiner
> applied a U.S. patent to Schjeldahl which disclosed injection molding a tubular

preform and then injecting air into the preform to expand it against a mold (blow molding). The reference did not directly state that the end product balloon was biaxially oriented. It did disclose that the balloon was "formed from a thin flexible inelastic, high tensile strength, biaxially oriented synthetic plastic material." *Id.* at 1462 (emphasis in original). The examiner argued that Schjeldahl's balloon was inherently biaxially oriented. The Board reversed on the basis that the examiner did not provide objective evidence or cogent technical reasoning to support the conclusion of inherency.).

The Examiner has neither stated that the rejection is based on inherency, nor provided any <u>basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.</u>

On page 11 of the instant Office Action, the Examiner appears to request that Applicants read the entire disclosure of HERZ for other language which may possibly disclose or suggest features recited in the claims. Applicants remind the Examiner that it is the Examiner, not Applicants, who bears the initial burden in establishing a case of unpatentability or obviousness. Applicants submit that the Examiner has not set forth a prima facie case of obviousness at least because the Examiner has failed to identify where in HERZ there is disclosed or suggested <u>each and every feature</u> recited in the claims. Applicants refer the Examiner to MPEP 2142 which states:

> The legal concept of *prima facie* obviousness is a procedural tool of examination which applies broadly to all arts. It allocates who has the burden of going forward with production of evidence in each step of the examination process. See *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *In re Linter*, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972); *In re Saunders*, 444 F.2d 599, 170 USPQ 213 (CCPA 1971); *In re Tiffin*, 443 F.2d 394, 170 USPQ 88 (CCPA 1971), *amended*, 448 F.2d 791, 171 USPQ 294 (CCPA 1971); *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968). <u>The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.</u> If, however, the examiner does produce a *prima facie* case, the burden of coming forward with evidence or arguments shifts to the applicant who may submit

additional evidence of nonobviousness, such as comparative test data showing that the claimed invention possesses improved properties not expected by the prior art. The initial evaluation of *prima facie* obviousness thus relieves both the examiner and applicant from evaluating evidence beyond the prior art and the evidence in the specification as filed until the art has been shown to suggest the claimed invention. Emphasis Added.

ESTABLISHING A **PRIMA FACIE** *CASE OF OBVIOUSNESS*

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See **MPEP § 2143 - § 2143.03** for decisions pertinent to each of these criteria. Emphasis Added.

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See **MPEP § 2144 - § 2144.09** for examples of reasoning supporting obviousness rejections. Emphasis Added.
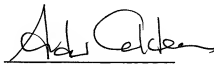
Because at least claims 1, 7 and 8 each recite one of more features not disclosed, or even suggested, by HERZ, and because the Examiner has failed to set forth any prior art which teaches the missing features, Applicants submit that the instant rejection of claims 1-19 should be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for

allowance. The Examiner is respectfully requested to pass the above application to

issue. The Examiner is invited to contact the undersigned at the telephone number

listed below, if needed. Applicants hereby make a written conditional petition for

extension of time, if required. Please charge any deficiencies in fees and credit any

overpayment of fees to Deposit Account No.09-0457.

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